

**RATIONAL FOR MINERAL ESTATE
CONVEYANCE/RETENTION
WITH SURFACE ESTATE
Supplement to the Mineral Potential Report
Revised 03/16/2005**

A detailed mineral potential report for the BLM parcels involved in the Emerald Mountain Land Exchange proposal was completed in January of 2004. An addendum to this report to include eleven additional parcels was completed in August of 2004. In addition to a mineral potential report, a minerals management efficiency and accessibility assessment of BLM mineral estate was also completed in March of 2005. The following table is a result of that assessment with recommendations for retention or conveyance of the mineral estate.

It is BLM's desire to minimize split estate where split estate may decrease management efficiency. This addendum also tries to honor as much as possible the recommendations of the Mineral Potential Report, realizing the report did not look at mineral ownership patterns and sizes. The Mineral Potential Report recommends that parcels encumbered with leases should have the mineral estate retained. It is the wish of this office that parcels encumbered with leases, but rating low potential have the mineral estate conveyed to reduce the amount of split estate. After conferring with the Colorado State Office it was decided that the minerals could be conveyed with proper precautions. The minerals on these parcels can be conveyed with conditions attached to the title that will honor the terms and conditions of the lease. The BLM as the lessor will also have appropriate protection.

In the case where a parcel is completely surrounded by similar federal mineral estate, it is recommended to retain the minerals regardless of the mineral potential. The rational is that the BLM does not want to create holes in contiguous mineral estate which would complicate future management of minerals by restricting access, complicating potential royalty issues and/or causing drainage situations. In the case where conveying mineral estate would have left an isolated federal mineral parcel (such as a tip of a peninsula), it is also recommended to retain the mineral estate as to prevent the isolation of this federal mineral parcel from possible future access for development. Conveyance of this type would also decrease management efficiency. In the case where a BLM parcel is completely surrounded by private mineral estate and of sufficiently small size (< 81 acres), conveyance of mineral estate is recommended regardless of potential ranking or lease encumbrances. Where federal mineral estate of a particular type is completely surrounded by federal mineral estate of another type, creating islands, the part of the mineral estate that is anomalous to the surrounding estate is recommended for conveyance when the mineral potential is rated as low. For example, when a parcel with **all** minerals is completely surrounded by federal coal only and the other mineral (including oil & gas) potential is rated as low, it is recommended that the federal coal mineral estate be retained and the rest the mineral estate be conveyed to the participant. This will keep the federal coal estate blocked up but eliminate islands of anomalous mineral estate and help reduce split estate issues which have become increasingly cumbersome in recent years.

Less clear cut situations also exist. Where BLM parcels, with low potential, are located on the boundary of a block of mineral estate (having only partial contiguous federal mineral estate) and the parcels are not critical for access to the federal mineral estate, conveyance is also recommended in the interest of eliminating as much split estate as possible. This situation is true for parcels which border all federal minerals as well as partial federal mineral estate. However, in the cases where the mineral potential is moderate or high and already leased, it was decided to retain the minerals to facilitate more efficient management of a mineral resource that is more likely to be developed. This is especially the case in parcels 80, 81 and 84 which are scheduled to be mined in the near future.

There are 129 BLM parcels totaling 15,621.04 acres (all with federal minerals) involved with this land exchange. All together there are fifty nine parcels (5,836.85 acres) where all of the federal mineral estate is recommended for conveyance and fifteen parcels (4343.90 acres) where retention of all the federal mineral estate is recommended. There are forty eight parcels (4594.30 acres) recommended for retention of the coal mineral estate only. Seven parcels (845.99 acres) are recommended for conveyance of the oil and gas mineral estate and retention of other minerals which have a moderate or high potential. No high potential minerals were recommended for conveyance. Only three parcels where mineral potential is moderate was that mineral commodity recommended for conveyance due to their isolation from a larger similar mineral estate and because of their small size.

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
T12N R88W	Sparks	Sparks	79.88	O&G	low Moderate	O&G coal	3 sides federal coal minerals, appended to larger block of federal minerals, surrounded by private surface; no road access; retain coal only	001
T12N R88W	Marsh	Marsh	147.50	O&G	low Moderate	O&G Coal, gold, aggregate	2/3 sounded by federal coal minerals, appended to larger block; surrounded by private surface; convey oil & gas only, retain other minerals	002
T12N R88W	Stull Ranches	Stull Ranches	40.00	O&G	low Moderate	O&G coal	Surrounded by federal minerals, appended to larger block of fed minerals, surrounded by private surface, has corner contact with 80 BLM parcel; road access; retain all	003
T12N R88W	Stull Ranches	Stull Ranches	17.25	O&G	low moderate	O&G coal	3 sides federal minerals, appended to larger block, surrounded by private and state surface; no road access, 2 track ½ to west;	004

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							retain coal only	
T12N R88W	Marsh	Marsh	40.00		Moderate	coal	Surrounded by federal all minerals, contiguous with other BLM surface estate; no road access; retain all	005
T12N R88W	Sheep Mtn Partnership	Sheep Mtn Partnership	120.00	O&G	low moderate	O&G coal	Surrounded by federal all minerals, contiguous with other BLM surface estate; two track access; retain all	006
T12N R87W	Sheep Mtn Partnership	Sheep Mtn Partnership	19.47	O&G	low moderate	O&G coal	Surrounded by mostly federal coal minerals and private surface; no road access; retain coal only	008
T12N R87W	Sheep Mtn Partnership	Sheep Mtn Partnership	10.98	O&G	low moderate	O&G coal	4/5 surrounded by federal minerals and completely by private surface; no road access; retain coal only	009
T10N R86W	Fetcher	Fetcher	120.00		low	All	Surrounded by federal coal minerals and private surface; no road access, private road ½ mile to SW; retain coal only	011
T10N R86W	Hill	Hill	40.00		low	All	3/4 surrounded by federal	012

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							minerals and by private surface; poor access thru forest on west side; convey all	
T10N R85W	Woods	Button	48.09		low	All	1/2 surrounded by federal minerals and completely by private surface; no road access; convey all	013
T10N R85W	State Land Board	Sellers	24.09		moderate	Gold, aggregate	Surrounded by private minerals and private surface; sliver; convey all due to isolation and small size	014
T10N R85W	Ross	Ross	4.87		low	All	Surrounded by private minerals and private surface; sliver; convey all	015
T08-09N R88-89W	Rancho Greco/Nottingham	Rancho Greco/Nottingham	875.02	O&G	low	All	4/5 surrounded by federal minerals and private surface; contiguous with FS lands on north end; road access; retain coal only	016
T09N R88W	Nottingham	Nottingham	23.12	O&G	low	All	1/2 surrounded by federal minerals, 1/2 contiguous with FS surface, no road access; convey all	017

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
T08-09N R88W	Nottingham	Nottingham	40.33	O&G	low	All	Surrounded by private minerals and private surface; no road access; convey all	018
T09N R88W	Nottingham	Nottingham	40.00	O&G	low	All	Surrounded by private minerals and private surface; private road access; convey all	019
T09N R88W	Nottingham	Nottingham	47.90	O&G	low	All	Surrounded by mostly federal coal minerals, north side contiguous with FS lands, fair access thru forest; road 1/8 mile to west; retain coal only	020
T09 R86W	Wheatley/King/Allen	Wheatley	12.92		low	All	Surrounded by federal coal minerals and private surface, road access thru private, sliver parcel; retain coal only	021
T09 R86W	Routt Investments	Ford Smith	1.93		low	All	Surrounded by 1/2 federal minerals and completely by private surface, no road access; convey all	021a
T09 R86W	Dean & Laura Chew	Dean & Laura Chew	40.00		low	All	Surrounded by mostly federal coal minerals, north side contiguous	022

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							with FS lands, no road access, fair access thru forest; retain coal only	
T09 R86W	Roult Investments	Ford Smith	28.84		low	All	Surrounded ½ federal minerals and all private surface; no road access, sliver of land; convey all	022a
T09 R86W	Dean & Laura Chew	Dean & Laura Chew	44.77		low	All	Surrounded by mostly federal coal minerals and private surface; no road access; retain coal only	023
T08N R88-89W	Nottingham/Murphy	Nottingham/Murphy	388.30	O&G	low moderate	O&G aggregate	Surrounded by federal coal minerals and private surface, county road access; convey oil and gas only, retain other coal and other minerals	024
T08N R88W	J. Spitzley	Elkhead Ranch	77.96	O&G	low	All	Surrounded by federal minerals and private surface; no road access; retain all	025
T08N R88W	Nottingham/Murphy	Nottingham/Murphy	40.01	O&G	low	All	1/2 surrounded by federal minerals (coal only) and all private surface; no road access; retain coal only	026

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
T08N R88W	Nottingham	Nottingham	48.24	O&G	low	All	1/2 surrounded by federal minerals and all private surface; no road access; convey all	027
T08N R88W	Nottingham/Murphy	Nottingham/Murphy	74.45	O&G	low	All	1/2 surrounded by federal minerals and all private surface; road access across private land; convey all	028
T08N R88W	Murphy	Murphy	40.00		low	All	3/4 surrounded by federal minerals (coal only) and all private surface; fair access due to road near by; retain coal only	029
T08N R88W	Cook	Nottingham	36.19	O&G	low	All	Surrounded by mostly federal coal minerals and private surface, private road ¼ mile to south; retain coal only	031
T08N R88W	Nottingham	Nottingham	39.08	O&G	low	All	Surrounded by mostly federal coal minerals and private surface, county access ½ mile to the west of parcel; retain coal only	032
T08N R88W	Nottingham	McWilliams/Nottingham	592.64	O&G	low	All	2/3 Surrounded by federal minerals and completely surrounded	033

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							by mostly private and minor state surface, private road access; retain all	
T08N R86-87W	Mystic Hill Ranch	Meadows Realty	261.94		low	All	½ surrounded by federal minerals, and surrounded by private and state surface, no road access; convey all	037
T08N R87W	Mystic Hill Ranch	Smith Ranchos [S1]	120.00		low	All	¾ surrounded by federal minerals and completely surrounded by private surface, appended to small block of federal minerals, no road access; retain all	038
T08N R87W	Smith Rancho	Smith Rancho	40.00		low	All	¾ surrounded by federal minerals and completely surrounded by private surface, appended to small block of federal minerals, no road access; retain all	039
T07-08N R87W	Smith Rancho	Smith Rancho	322.44	O&G	low	All	1/3 surrounded by private minerals, completely surrounded by private lands, private road	040

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							access; retain all	
T08N R86W	Ellsworth	Chew	50.77		low	All	Completely surrounded by private minerals, completely surrounded by private lands, no road access; convey all	040a
T08N R86W	Chew/Harvey	Chew	98.70		low	All	¾ surrounded by federal minerals and all by private surface, no road access; convey all	041
T08N R86W	Poole/Nottingham/Meadows Realty	Poole/Nottingham/Meadows	1070.78		low	All	1/2 surrounded by private minerals, completely surrounded by private lands, private road access; convey all	042
T08N R86W	Guthrie	Guthrie	11.58		low	All	1/2 surrounded by private minerals, completely surrounded by private lands, private road access; convey all	043
T08N R86W	Poole	Poole	7.56		low	All	3/5 surrounded by private minerals and completely surrounded by private land, no road access; convey all	044
T08N R86W	Meadows Realty	Meadows Realty	21.40		low	All	1/3 surrounded by private	045

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							minerals, completely surrounded by private lands, no road access; convey all	
T08N R86W	Meadows Realty	Meadows Realty	39.84		low	All	Surrounded by private minerals and private surface, no road access; convey all	046
T08N R85W	Chew	Chew	756.71		low	All	Surrounded by private surface and mostly private minerals, poor access, convey all	047
T08N R85W	Chew	Chew	8.06		low	All	4/5 surrounded by private minerals, completely surrounded by private lands, no road access; convey all	048
T08N R85W	Komfala	Chew	8.65		low	All	1/2 surrounded by private minerals, completely surrounded by private lands, no road access; convey all	049
T08N R85W	Souder et. Al. (Souder, Riskind & Taylor)	n/a	267.17		low	All	2/3 surrounded by private minerals, 1/3 surrounded by private lands, 1/3 surrounded by state land, 1/3 surrounded by FS	050

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							lands, no road access; convey all	
T08N R85W	State Land Board	n/a	7.51		Moderate Moderate	Gold, aggregate	Surrounded by private minerals and no federal surface, no road access, sliver; convey all due to isolation and small size	051
T07N R88W	State Land Board	Warrick Pastures	40.00	O&G	low	All	¾ surrounded by non federal minerals and state surface, no road access; convey all	052
T07N R88W	Nottingham	Nottingham	40.00	O&G	low	All	Surrounded by mostly federal coal minerals and private surface, no road access; retain coal only	054
T07N R88W	Nottingham	Pitney	35.12	O&G	low	All	¾ surrounded by federal minerals and private surface, no road access; convey all	055
T07N R88W	Nottingham	Nottingham	40.00	O&G	low moderate	O&G coal	Surrounded by federal coal minerals and private surface, no road access; retain coal only	056
T07N R88W	Nottingham	Nottingham	40.00	O&G	low moderate	O&G coal	Surrounded by federal coal minerals and private surface, county road	057

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							access 1/10 mile away; retain coal only	
T07N R87W	Smith Rancho/Waltrip	Smith Rancho/Waltrip	596.97	O&G	low moderate	O&G coal	3/5 surrounded by federal minerals, and completely surrounded by private surface, private road access; retain all	058
T07N R86-87W	Waltrip	Waltrip	40.03	O&G	low moderate	O&G geothermal	Surrounded by private minerals and private surface, county road access; convey all minerals due to isolation and small size	059
T07N R87W	Waltrip	Waltrip	62.71	O&G	low moderate	O&G geothermal	4/5 surrounded by mostly federal coal minerals and completely surrounded by private surface, no road access; convey oil & gas, retain coal and other minerals	060
T07N R87W	Smith Rancho	Smith Rancho	160.00	O&G	low moderate	O&G Meta-shale	Surrounded by mostly federal coal minerals and completely by private surface, no road access; convey oil & gas, retain coal and other minerals	061
T07N R87W	Waltrip	Waltrip	170.76	O&G	High	O&G,	Located within Wolf	062

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
					Moderate Moderate	coal, geothermal	Mountain oil field, 4/5 surrounded by federal coal minerals, completely surrounded by private land, 1/10 mile from county road 52; retain all	
T07N R87W	Waltrip	Waltrip	39.27	O&G	low	All	3/4 Surrounded by federal minerals (coal only) and private surface and 1/4 by state surface, 2 track access; convey all	063
T07N R87W	Waltrip	Waltrip	40.00		moderate	coal	1/4 Surrounded by federal minerals and completely by private surface, no road access; convey all	064
T07N R86W	Smith Rancho	Smith Rancho	40.30		low	All	Surrounded by private minerals and private surface, no road access; convey all	065
T07N R86W	Smith Rancho	Smith Rancho	186.18	O&G	low	All	1/3 Surrounded by federal minerals and completely by private surface, private road access; convey all	066
T07N R86W	Waltrip	Waltrip	7.48		moderate	geothermal	1/2 Surrounded by federal minerals and completely by private surface, no	067

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							road access; convey oil & gas and coal, retain other minerals	
T07N R86W	Sherrod	n/a	8.69		low	All	Surrounded by private minerals and private surface; sliver; county road 46 access; convey all	068
T07N R86W	Waltrip	Waltrip	972.65		moderate	coal	1/3 Surrounded by federal minerals and completely by private surface, no road access; retain all	069
T07N R86W	Waltrip	Waltrip	6.55		moderate	geothermal	1/2 Surrounded by federal minerals and completely by private surface, no road access; convey all	070
T07N R86W	Utterback	Utterback	120.00		low	All	3/5 Surrounded by federal minerals and completely by private surface, private road access; retain all	071
T06N R89W	Frentress		41.86	O&G	low moderate	O&G coal	Surrounded by federal coal minerals and by private surface, no road access; retain coal only	073

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
T06N R86W	State Land Board	Camilletti	40.00		moderate	coal	Surrounded by non federal minerals, $\frac{3}{4}$ state surface, $\frac{1}{4}$ by private surface, no road access; convey all	076
T06N R86W	Iacovetto	Iacovetto	120.00	O&G	low moderate	O&G coal	$\frac{4}{5}$ Surrounded by federal minerals (all coal some O&G) and by private surface, $\frac{1}{5}$ bordered by state land, no road access; retain coal only	077
T06N R84W	Solo		40.00		low	All	$\frac{3}{4}$ Surrounded by private minerals and by private surface, $\frac{1}{4}$ bordered FS land, private road access; convey all	078
T05N R87-88W	Ricks	Valora	160.00	O&G	low high	O&G coal	$\frac{7}{8}$ Surrounded by federal coal minerals and completely by private surface, no road access, road $\frac{1}{8}$ mile to east; retain coal only	080
T05N R88W	Ricks	Ricks	40.00	COAL	high	coal	$\frac{3}{4}$ Surrounded by federal coal & O&G minerals, completely surrounded by private land,	081

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							scheduled to be mined; retain coal only	
T04-05N R87-88W	Cross Mountain	Cross Mountain	202.84		moderate	O&G	1/5 surrounded by federal minerals, surrounded by private lands and state land, 2 track access; convey all	082
T05N R87W	J. Maneotis	Maneotis	40.00	O&G	Low moderate	O&G coal	1/4 surrounded by federal minerals, completely surrounded by private surface, no road access; convey all	082a
T05N R87W	Cross Mountain	Cross Mountain	20.00	O&G COAL	Low moderate	O&G coal	2/3 surrounded by federal minerals (mostly coal), completely surrounded by private surface, no road access; retain coal only	083a
T05N R87W	Patrick	Valora	160.00	O&G COAL	low High	O&G coal	3/4 surrounded by federal coal minerals, completely surrounded by private surface, scheduled to be mined; retain coal only	084
T05N R87W	Ricks	Valora	40.00	O&G	low Moderate	O&G coal	surrounded by federal coal minerals, completely surrounded by private surface, road access;	085

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							retain coal only	
T05N R87W	Montieth	Cross Mountain	80.00	O&G	moderate	Coal, O&G	surrounded by federal minerals, 4/5 surrounded by private surface, 1/5 by state surface, road access; retain all	088
T05N R85W	Ludlow		9.47		Moderate	coal	4/5 Surrounded by federal coal minerals and completely by private surface, no road access; retain coal only	089
T05N R85W	Roundtree		26.06		low	All	Surrounded by private minerals and by private surface, county road 41 access; convey all	090
T04N R89W	Wyman, L	Tuttle/Wyman L.	160.00	O&G	low	All	1/3 Surrounded by federal minerals and completely by private surface, private road access; convey all	091
T04N R88W	Cross Mountain	Cross Mountain	200.00		moderate	coal	4/5 Surrounded by mixed federal minerals and completely by private surface, no road access; retain coal only	093
T04N R88W	Cross Mountain	Cross Mountain	480.00		moderate	coal	7/8 Surrounded by mixed	094

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							federal minerals and completely by private surface, no road access; retain coal only	
T04N R88W	Cross Mountain	Cross Mountain	40.00		low	All	Surrounded by private minerals and by private surface, no road access; convey all	095
T04N R88W	Cross Mountain	Cross Mountain	40.00		low	All	Surrounded by private minerals and by private surface, no road access; convey all	096
T04N R88W	Cross Mountain	Cross Mountain	440.00		low	All	4/5 Surrounded by private minerals and completely by private surface, no road access; convey all	097
T04N R88W	Cross Mountain	Cross Mountain	200.00		low	All	4/5 Surrounded by federal minerals and by private surface, 1/5 bordered by FS surface, no road access; convey all	098
T04N R87W	Cross Mountain	Cross Mountain	40.00		low	All	Surrounded by private minerals and by private surface, no road access; convey all	099

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
T04N R87W	Cross Mountain/Hunter	Cross Mountain/Hunter	1040.00	O&G	low high	O&G coal	3/4 surrounded by federal minerals, completely surrounded by private surface, road access; retain all	101
T04N R86W	Hunter	Hunter	46.46		moderate	coal	Completely surrounded by federal coal minerals, completely surrounded by private surface, road 1/8 mile to SE; retain coal only	102
T04N R86W	Hunter	Hunter	40.00	O&G	low moderate	O&G coal	Completely surrounded by federal coal minerals, completely surrounded by private surface, road access; retain coal only	104
T04N R86W	Brusca	Knott	40.00	O&G	low	All	Completely surrounded by federal coal minerals, completely surrounded by private surface, road access; retain coal only	104a
T04N R86W	Boehm		40.00	O&G	low	All	Completely surrounded by federal coal minerals, completely surrounded by private surface, road access; retain coal only	104b
T04N R86W	Boehm		40.00	O&G	low	All	Completely surrounded	104c

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							by federal minerals, completely surrounded by private surface, road access; retain coal only	
T04N R86W	Monroe		40.00	COAL	moderate	coal	Completely surrounded by federal coal minerals, completely surrounded by private surface, road access; retain coal only	104d
T04N R85W	Jones	n/a	80.69		low	All	1/5 Surrounded by federal minerals and completely by private surface, no road access; convey all	105
T04N R85W	A. Maneotis	Maneotis	39.97		low	All	completely Surrounded by private minerals and completely by private surface, private road access; convey all	105a
T04N R85W	A. Maneotis	Maneotis	82.33		low	All	completely Surrounded by private minerals and completely by private surface, no road access; convey all	105b
T04N R85W	A. Maneotis	Maneotis	41.40	coal	low	All	completely Surrounded by private minerals and completely by private	105c

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							surface, hwy 131 access; convey all	
T03N R88W	Cosby	n/a	40.00		moderate	aggregate	1/2 Surrounded by federal minerals and completely by private surface, no road access; convey oil & gas and coal, retain other minerals	106
T03N R88W	Cross Mountain	Cross Mountain	320.95		low	All	Completely surrounded by mixed federal minerals, 4/5 surrounded by private land, 1/5 by FS land, 2 track access; retain coal only	107
T03N R88W	Cosby	n/a	40.00		low	All	Completely surrounded by federal minerals (mostly coal), and private land, no road access; retain coal only	108
T03N R88W	Cosby	n/a	425.02		low	All	4/5 surrounded by federal minerals (mostly coal), 4/5 surrounded by private land, 1/5 by FS land, 2 track access; retain coal only	109
T03N R88W	Omlid	Omlid	40.00		low	All	1/4 Surrounded by	110

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							federal minerals and completely by private surface, county road access; convey all	
T03N R88W	Omlid	Omlid	40.00		low	All	completely Surrounded by private minerals and completely by private surface, county road access; convey all	111
T03N R88W	Signs	Signs	40.00		low	All	1/4 Surrounded by federal minerals and completely by private surface, county road access; convey all	112
T03N R88W	Cosby	n/a	40.00		low	All	completely Surrounded by federal minerals (mostly coal) and completely by private surface, no road access; retain coal only	113
T03N R87W	Hunter	Maneotis	40.00		low	All	Completely surrounded by federal coal minerals, $\frac{3}{4}$ private surface, and $\frac{1}{4}$ FS land, just off county road; retain coal only	114
T03N R86W	J. Maneotis	Maneotis	83.83		moderate	coal	completely Surrounded by mixed federal	114b

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							minerals and completely by private surface, just off county road; retain coal only	
T03N R86W	Prairie Mountain		243.88	O&G	low	All	¾ surrounded by federal coal minerals, completely surrounded by private land, 2 track access; retain coal only	114c
T03N R85- 86W	J. Maneotis	Maneotis		O&G			Same as above;	114c
T03N R85- 86W	Wertenteil	Maneotis	229.79	O&G	low	All	1/2 surrounded by coal federal minerals, completely surrounded by private land, 2 track access; convey all	115
T03N R86W	J. Maneotis	Maneotis	10.58	O&G	low	All	½ surrounded by federal minerals, completely by private land, no road access; convey all	115a
T03N R86W	Pinnacle Peak	Maneotis	136.38	O&G	low moderate	O&G coal	completely Surrounded by federal minerals (mostly coal) and completely by private surface, no road access; retain coal only	116
T03N R86W	Pinnacle Peak	Pinnacle Peak	10.48		low	All	completely Surrounded	117

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							by federal minerals and completely by private surface, county road access to fed minerals; retain all	
T03N R86W	Pinnacle Peak	Pinnacle Peak	20.98		low	All	9/10 surrounded by federal minerals (mostly coal), 3/5 surrounded by private surface, and 2/5 by FS land, county road access; retain coal only	118
T03N R86W	Viele		31.26		low	All	completely Surrounded by federal coal minerals and completely by private surface, no road access; retain coal only	118a
T03N R86W	Pinnacle Peak	Pinnacle Peak	83.33		low	All	completely Surrounded by federal coal minerals and completely by private surface, county road access; retain coal only	119
T03N R85W	Crawford	Maneotis	43.21		low	All	½ surrounded by federal minerals, completely surrounded by private land, no road access; convey all	120

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
T03N R85W	Craig	n/a	41.33		low	All	completely Surrounded by private minerals and completely by private surface, no road access, just west of Phippsburg; convey all	121
T03N R85W	Wertenteil	Wertenteil	83.51		low	All	completely Surrounded by private minerals and completely by private surface, road access; convey all	121a
T02N R86W	Broken Bone Ranch	Broken Bone Ranch	7.50		low	All	completely Surrounded by federal coal minerals and completely by private surface, no road access; retain coal only	123
T02N R86W	Broken Bone Ranch	Broken Bone Ranch	10.00		low	All	completely Surrounded by federal coal minerals and 4/5 by private surface, 1/5 FS land, no road access; retain coal only	124
T02N R86W	Broken Bone Ranch	Broken Bone Ranch	40.00		moderate	aggregate	Completely surrounded by federal minerals (mostly coal), ½ surrounded by FS land and ½ by private surface,	125

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							Close to road access; convey oil and gas, retain coal and other minerals	
T02N R86W	Broken Bone Ranch	Broken Bone Ranch	10.00		moderate	aggregate	completely Surrounded by federal coal minerals and completely by private surface, private road access; retain coal only, convey other minerals due to small size and isolation	126
T02N R85W	Broken Bone Ranch	Broken Bone Ranch	101.10		low	All	1/3 surrounded by federal minerals, completely surrounded by private surface, private road access, convey all	128
T02N R85W	R & T Land & Cattle	R & T Land & Cattle	80.00		moderate	aggregate	Completely surrounded by non-federal minerals, $\frac{3}{4}$ surrounded by private surface and $\frac{1}{4}$ by state surface, no road access, convey all due to small size and isolation	129
T02N R85W	Brooks	Brooks	80.00		moderate	aggregate	Completely surrounded by private minerals and private surface, just off hwy 131; convey all due	130

TOWNSHIP	PARTICIPANT	PERMITTEE	ACRES	LEASE	MINERAL POTENTIAL	COMMODITY	MINERAL MANAGEMENT EFFICIENCY /ACCESS/ RECOMMENDATION	PARCEL #
							to small size and isolation	
T01N R85W	Horowitz	Horowitz	153.27		low	All	¾ surrounded by federal minerals and private surface, ¼ FS land, private road access; convey all	131